

**DIAGNOSTICS, PROTECTION, AND ISOLATION SYSTEM FOR
ELECTRONIC DEVICES ON A VEHICLE DATA COMMUNICATION BUS**

Abstract of the Disclosure

A system for use in programming and diagnostics of electronic devices (32) in a vehicle includes a connector jack (36) having a plurality of electrical connection sites configured for electrical connection to the electronic devices (32) in the vehicle. A shorting plug (38) configured to removably engage the connector jack (36) interconnects the plurality of electrical connection sites to form the data communication bus when the shorting plug (38) is engaged with the connector jack (36). An electronics module (50) configured to removably engage the connector jack (36) in place of the shorting plug includes a plurality of switching units (56) that, when set in a closed state, electrically interconnect each of the electronic devices (32) to form the data communication bus. Each switching unit (56a,...,56g) in the electronics module (50) is operable independently from the other switching units so that one or more of the switching units (56a,...,56g) may be set in an open state to electrically disconnect an electronic device (32) from the data communication bus. Methods for use in programming and diagnostics of electronic devices (32) in a vehicle include selectively setting one or more of the switching units (56) in an open state to electrically disconnect electronic devices from the data communication bus.

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